

A1
contd

sequentially for each subscriber identity to be migrated, changing the state of active subscriber data associated with said subscriber identity from active to standby, transferring said data to said second node whereupon its state is changed to active.

Add new claims 11 and 12:

sub
1037

11. (New) A computer program stored on a machine readable medium which is arranged to implement a method of migrating active subscriber data associated with a plurality of subscriber identities from a first Home Location Register (HLR) node to a second HLR node, said HLR nodes being connected by a fixed network, the method comprising the steps of:

a2

sequentially for each subscriber identity to be migrated, changing the state of active subscriber associated with said subscriber identity from active to standby, transferring said data to said second node whereupon its state is changed to active.

12. (New) A computer program implemented method as claimed in claim 11 further comprising the further step of:

implementing a diversion function such that subscriber data update and request transactions addressed for a subscriber identity arriving at one said node where the subscriber data is not active are forwarded to the other node.

REMARKS

The Examiner has rejected the application as being anticipated and/or obvious over Coulombe (US 6,115,463), Houde (US 5,623,532), Ericsson (US 5,956,637), and Nguyen (US 6,021,327). Reconsideration is requested in view of the amendments above and the comments which follow. The present application relates to the migration of subscriber data in communication systems networks from one database or home location register (HLR) to another database; while this

subscriber data is "on-line". In other words the communication system is maintained on-line or operational while the subscriber data is migrated from one HLR to another. The ability to provide on-line subscriber data migration is a significant advantage over prior art migration methods where the network had to be taken off-line while the subscriber data was transferred.

Typically the home location registers are located in different places either for network reasons or to minimize the impact of a disaster at one of these locations. Normally the transfer of subscriber data would then involve taking the network off-line so that no changes to the subscriber data are made, backing up the data from one HLR onto a tape or similar storage device and moving this by car for example to the location of the second HLR where the data would then be restored from the tape and the network operation resumed. The network outage could therefore be of a considerable duration measuring perhaps several hours. Any communications network being off-line for this length of time incurs a significant commercial penalty in terms of lack of revenues, and perhaps subscriber dissatisfaction. Therefore the facility to migrate subscriber data while maintaining the network on-line is of considerable commercial advantage. Applicants have achieved this facility using the invention set out in the present application. Claim 1 has been amended to more particularly and distinctly claim this invention.

Basis for the amendments to claim 1 can be found throughout the specification and for example at page 7 paragraph 3. New claims 11 and 12 are software claims corresponding to method claims 1 and 2.

Coulombe teaches the migration of subscriber data. However, this is in an ad hoc manner ordered by a system administrator for example due to a change in the subscriber state. Coulombe does

not describe the systematic transfer of subscriber data from one HLR to another while the communication system remains on-line. In particular, Coulombe does not describe the more particularly defined sequence of migrating data now incorporated in amended claim 1, involving a change of state to standby of an item of subscriber data in a first HLR, transfer of this data to a second HLR, and a change of state of the data to active in the second HLR, this process being repeated sequentially for each subscriber data to be migrated.

Houde teaches multiple HLR configurations, and in particular master-slave configurations where changes in data in the master HLR are copied to the slave HLR. This arrangement serves as system back-up in the case of failure of the master HLR, whereupon the slave HLR can be implemented as the new master HLR while the original master is repaired. While HLR back-up using two or more associated HLRs is related to the current invention as described in the present application, it is not the essence of the invention as claimed which involves migration of subscriber data from one HLR to another while subscriber data is being used by the system. Houde merely describes copying subscriber data from a master HLR as it is updated, to the slave HLR. There is no disclosure of on-line data migration. Furthermore there is no disclosure of the particular sequence of data migration now claimed in claim 1.

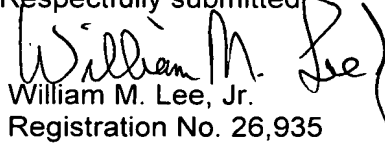
Ericsson discloses a method of reconfiguring location pointer structures using personalized pointer structures, personalized searches and databases for subscribers as opposed to prior art fixed general rules applicable to all subscribers. This invention provides an improved way of updating a mobile subscribers location within the network as the subscriber moves about the network. However, there is no disclosure of how actual subscriber data is transferred or migrated from one place to another, such as from one HLR to another. It is therefore not seen how Ericsson is

relevant to the present application. Similarly its combination with Nguyen in numbered paragraph 6 of the office action does not teach nor suggest the invention as now claimed.

It is therefore requested that, in lieu of more pertinent prior art, the present invention as amended by allowed.

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Respectfully submitted



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Version With Markings To Show Changes Made

1. (Amended) A method of migrating active subscriber data associated with a plurality of subscriber identities from a first Home Location Register (HLR) node to a second HLR node, said HLR nodes being connected by a fixed network, the method comprising the steps of:

sequentially for each subscriber identity to be migrated, [transferring] changing the state of active subscriber data associated with said identity from [said first node] active to standby, transferring said data to said second node, whereupon its state is changed to active.